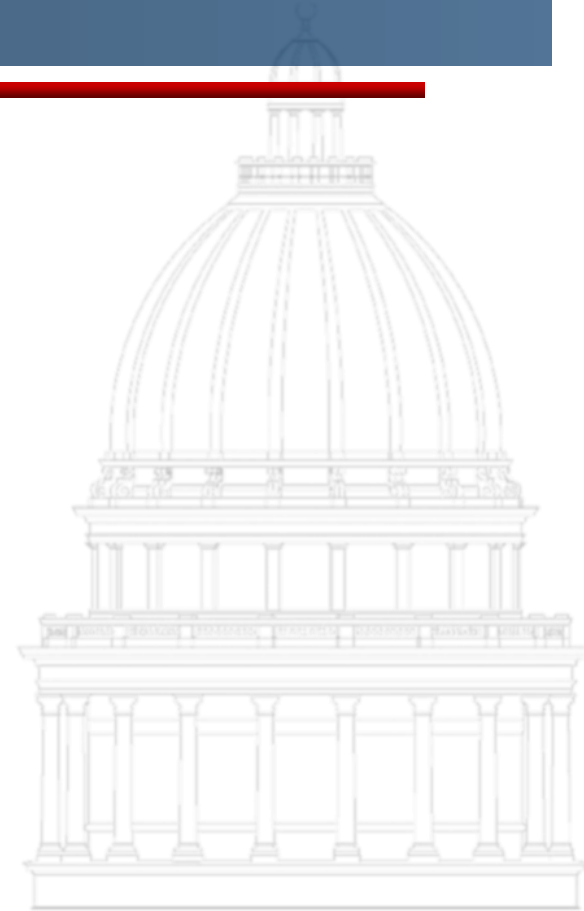


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# A Performance Audit of The Division of Air Quality

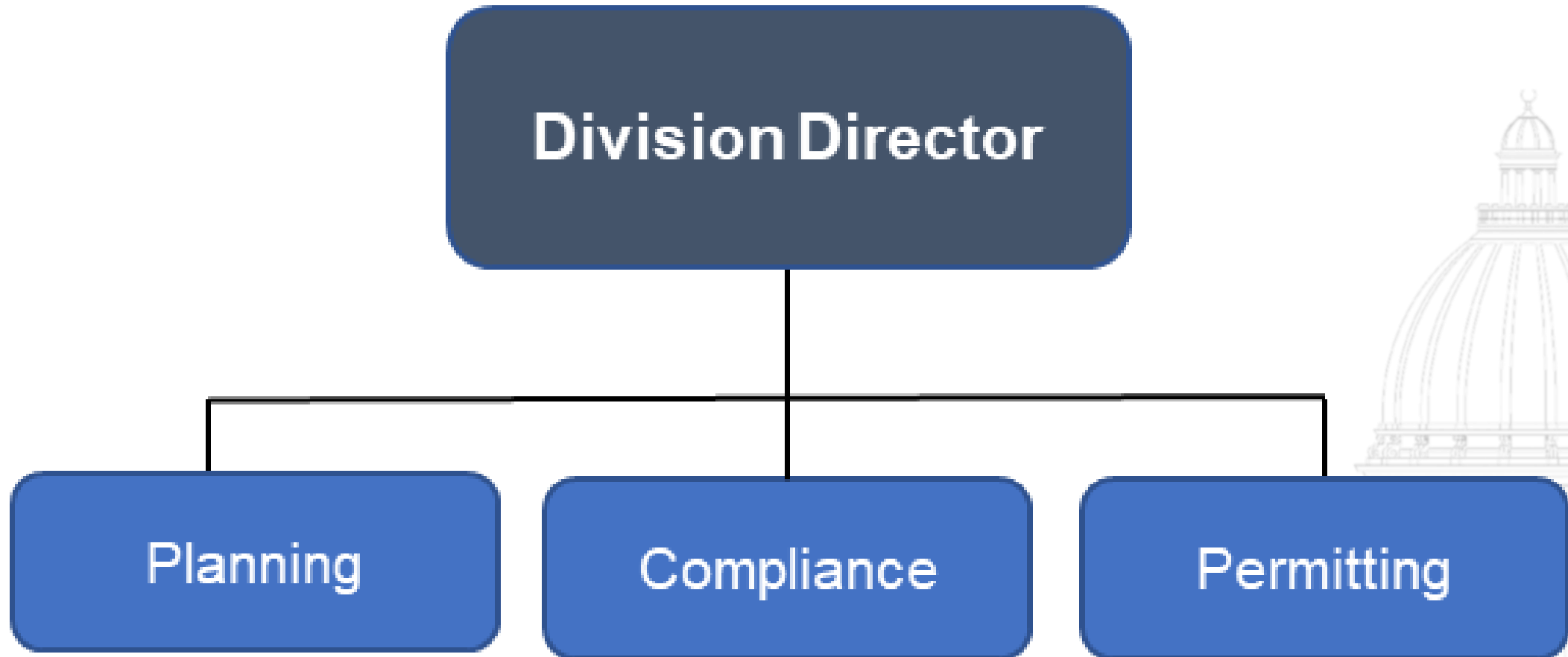
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Utah Legislative Auditor General  
August 18, 2020



# DAQ is Divided into Three Branches

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**FOR MORE INFORMATION**

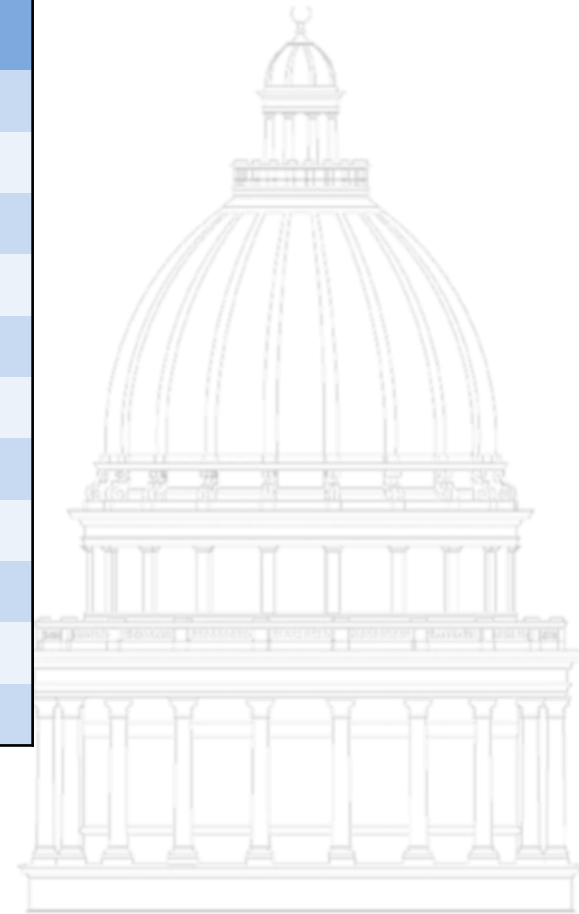
Chapter 1 page 2

# DAQ's Funding History

Funding Sources	2019 Funding	Percentage of DEQ Funding
Federal Funds	10,919,700	38%
General Fund One-Time	5,969,500	21
General Fund	6,069,500	21
Clean Fuel Conversion Fund	118,100	0
Dedicated Credits	6,175,100	22
Transfer	-1,054,600	-4
Beginning Non-Lapsing	315,000	1
<b>Sub Total</b>	<b>\$28,512,300</b>	<b>100%</b>
Closing Non-Lapsing	-5,490,500	-19
Lapsing	-92,300	0
<b>Total</b>	<b>\$22,929,500</b>	<b>80%*</b>

**FOR MORE INFORMATION**

Chapter 1, page 3

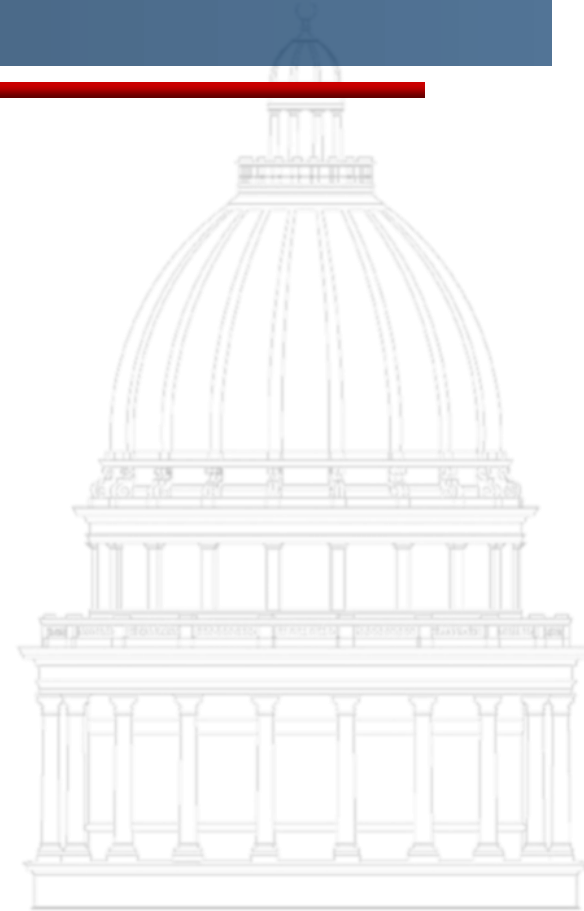


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# Chapter II

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## Centralized Database Needed to Determine Success of Air Quality Compliance Program



# The Compliance Branch Conducts Inspections of Several Types of Sources Based on Two Types of Permits

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## Major

- Emits over 100 tons of any air pollutant, 10 tons of any single hazardous air pollutant, or 25 tons of a combination of a hazardous and non-hazardous air pollutant
- Usually must obtain both an Approval Order (AO) and a Title V permit
- Must be inspected at least every two years
- Must pay annual fee per ton of emission

## Minor

- Emits over 5 tons of any air pollutant, but does not qualify as Major
- Must obtain an Approval Order (AO)
- No Federal inspection requirement, but DAQ strives to inspect each minor source at least once every five years
- No annual emission fee

## Other

- ATLAS – Lead paint and Asbestos
- Drycleaners
- Permit by rule oil and gas well sites
- Construction sites
- Some consumer products
- Open burning
- Winter woodburning

**FOR MORE INFORMATION**

**Chapter 2 pages 8-9**

# Lack of a Centralized Relational Database Causes Analytical Challenges and Inefficiencies

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- Key efficiency and effectiveness measures could not be easily calculated
- External analysis extremely cumbersome because of regular status changes
- Some data was incomplete

**FOR MORE INFORMATION**

Chapter 2 page 9-12





# Ineffective Communication Between Branches has Caused Inspections Inefficiencies

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- Two inspections were conducted based on outdated Approval Orders
- Two inspections were conducted before the Permitting Branch had issued an Approval Order
- A source's failure to apply for an Approval Order after receiving a "no further action" letter contingent upon submitting an application by an established deadline was only recently identified

**FOR MORE INFORMATION**

Chapter 2 page 12-13

# Most Inspections Are Timely, But Compliance Consistency Was Difficult to Ascertain

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- All major source inspections were conducted in a timely manner
- 99 percent of minor sources were inspected at least once every five years
- Penalties assessed consistently, but it was difficult to verify that other enforcement activities were complete and consistent

**FOR MORE INFORMATION**

Chapter 2 pages 13-15





# Recommendations

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1. We recommend that the Division of Air Quality find ways to improve data management to facilitate analysis of its effectiveness.
2. We recommend that the Division of Air Quality's compliance branch continue to collaborate with the permitting and planning branches to improve data and facilitate complete documentation of each site's permitting, inspection, and compliance history.
3. We recommend that the Division of Air Quality compliance branch periodically review its list of active major and minor sources to identify status changes.

**FOR MORE INFORMATION**

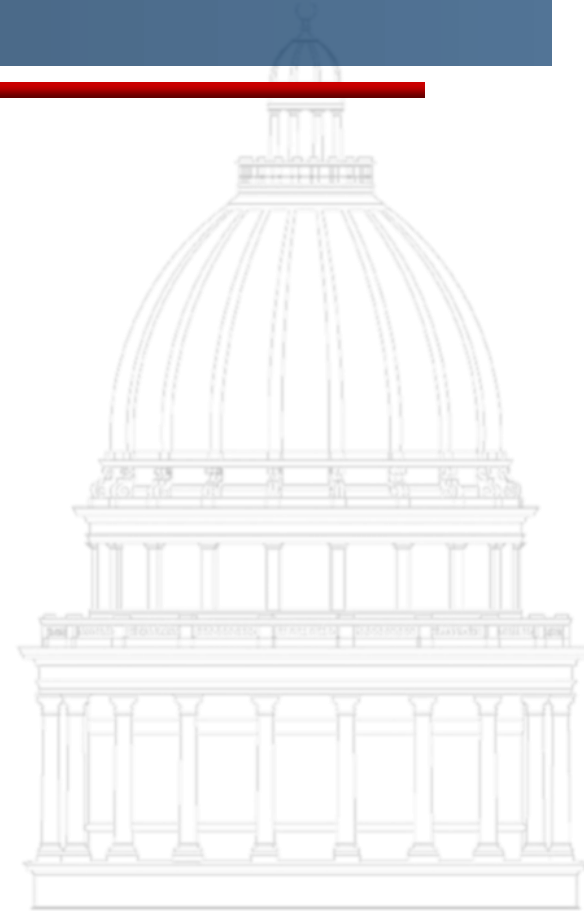
Chapter 2 page 16

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## Chapter III

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# DAQ Can Improve Its Oversight of Some New Air Quality Funds



# DAQ Funding has Increased from \$15.7 million in Fiscal Year 2015 to \$28.8 million in Fiscal Year 2020

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## Regulatory Responsibilities

- Compliance
- Air monitoring
- State Implementation Plan

## Air Quality Incentives and Initiatives

- Research
- Incentive Programs
- Air Quality Initiatives

**FOR MORE INFORMATION**

Chapter 3 pages 17-19

# Woodburning Appliance Conversion Program May Need Adjustments to Achieve Its Intended Purpose

## Low Income

- Conversion to Gas - \$4,000
- Conversion to Electric - \$2,000

## Other

- Conversion to Gas - \$2,800
- Conversion to Electric - \$1,000

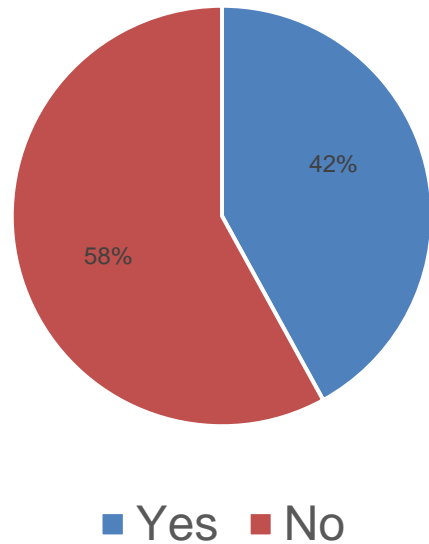
**FOR MORE INFORMATION**

**Chapter 3 pages 19-21**

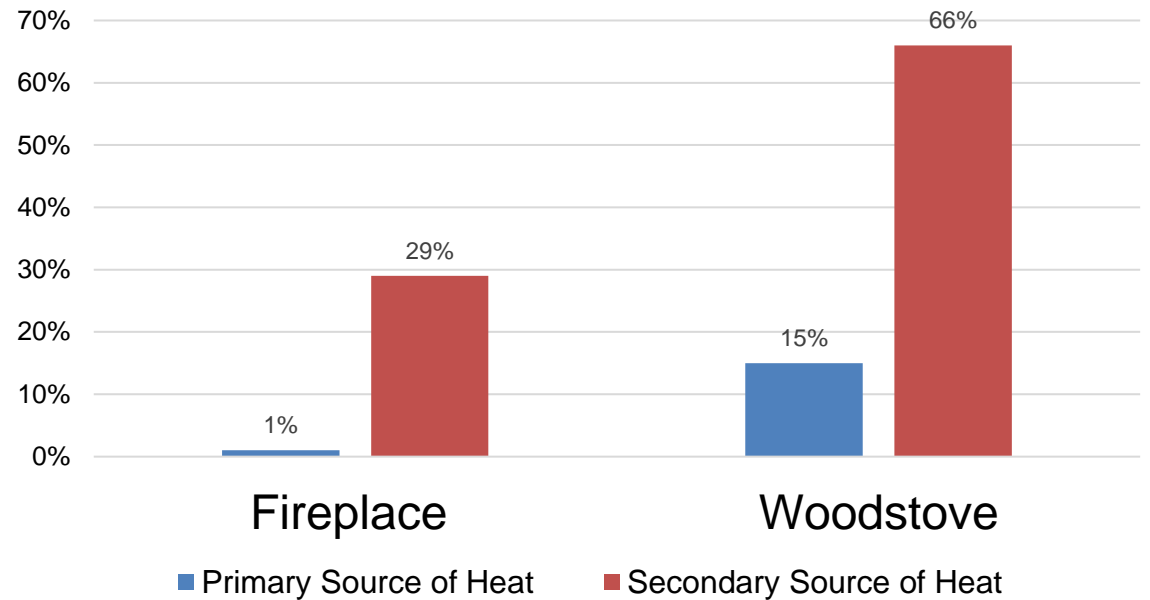


# Woodburning Habits According to the Northern Utah Air Quality Study

Burned Wood in the Past 12 Months



Woodburning as a Source of Heat

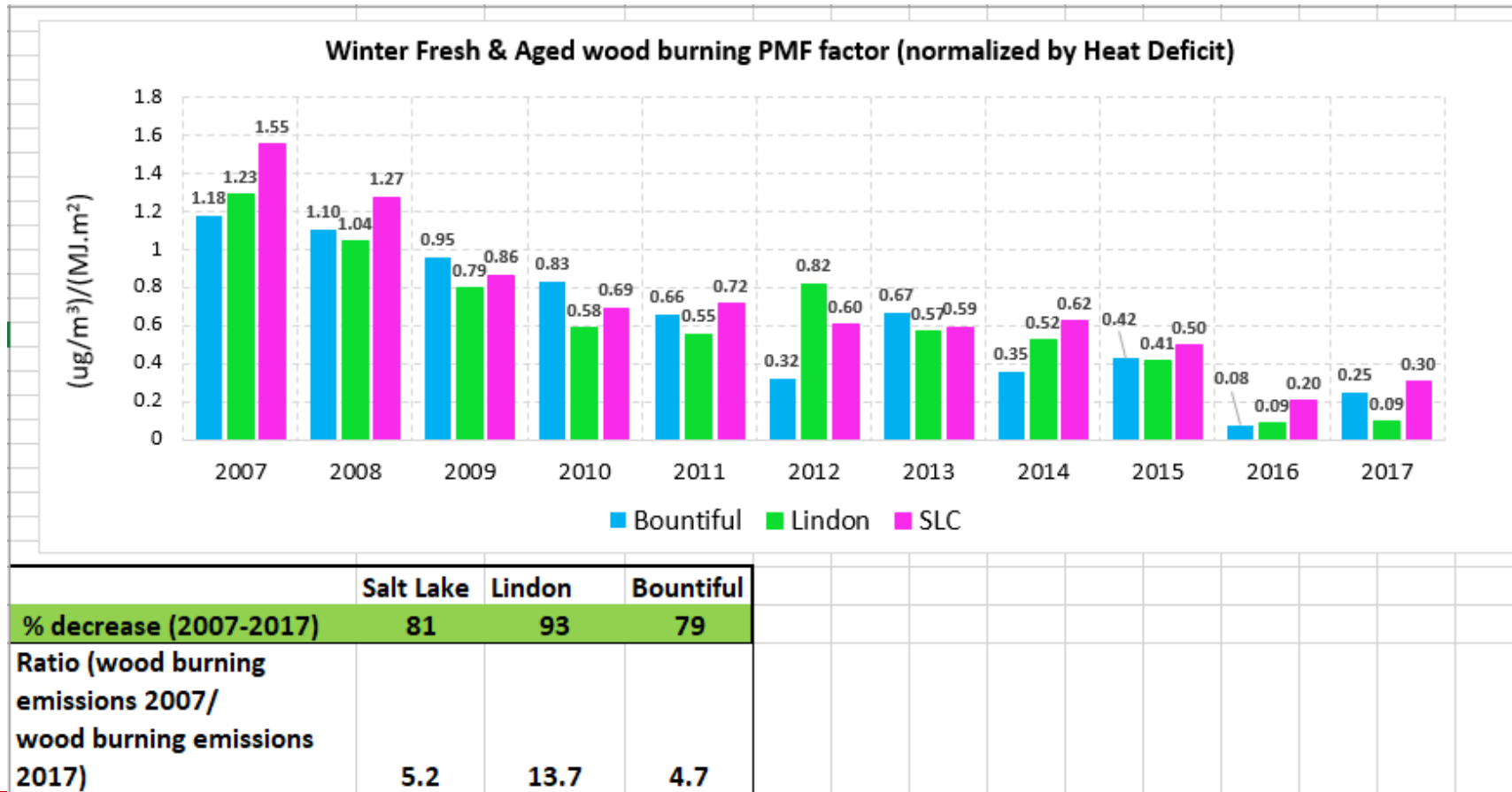


**FOR MORE INFORMATION**

**Chapter 3 pages 21-22**



# DAQ Research Conducted Prior to Program Implementation Suggests that Emissions from Woodburning Have Declined



**FOR MORE INFORMATION**

Chapter 3 page 23

For more information:

<https://deq.utah.gov/communication/news/is-pollution-from-wood-smoke-going-downall-your-burning-questions-answered>

# Calculated Reductions in Woodsmoke Account for Very Little of Total Woodsmoke

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Number of Completed Projects	83
Total Cost	\$245,400
Tons of Emissions Removed Per Year	0.85
Tons of Emissions from Residential Woodsmoke in Davis and SLCo Per Year*	3507.74
<b>Emissions Reduction Percent</b>	<b>0.02%</b>

**FOR MORE INFORMATION**

Chapter 3 page 24

# Recommendations

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1. We recommend that the Division of Air Quality target woodburning appliance conversions to households that burn wood as a primary or secondary source of heat.
2. We recommend that DAQ develop more accurate measures to assess the effectiveness of the Wood Stove and Fireplace Appliance Conversion Assistance Program
3. We recommend that DAQ conduct a cost-benefit analysis to determine if the measured reductions in woodsmoke are worth the cost of the program.
4. We recommend that DAQ reevaluate how the Wood Stove and Fireplace Appliance Conversion Assistance Program is administered to determine whether the program is successful or should be altered or permanently discontinued.

**FOR MORE INFORMATION**

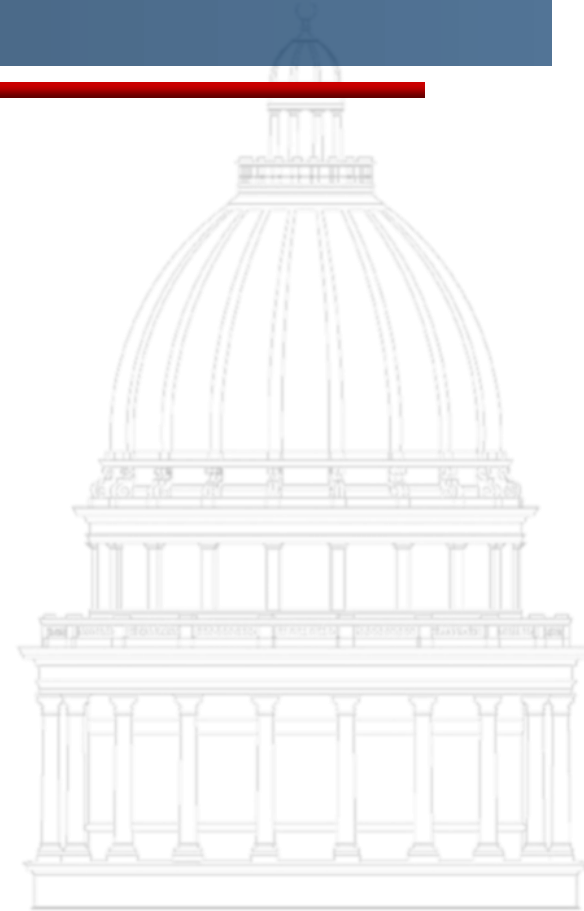
**Chapter 3 pages 24-25**

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## Chapter IV

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# **DAQ Should Take Advantage of Shared Jurisdiction in the Oil and Gas Sector**



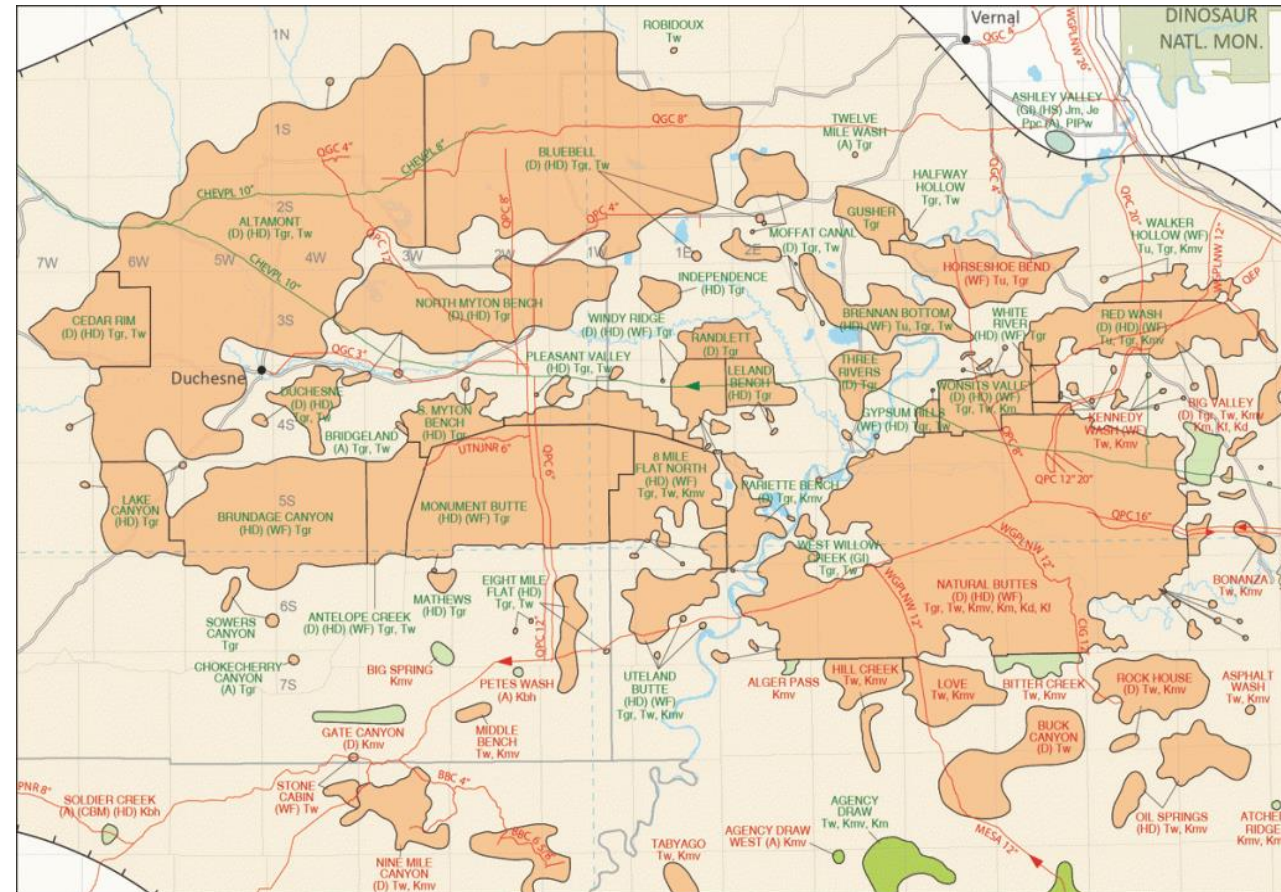
# DAQ Can Do More to Address Air Quality Needs Related to Oil and Gas Production

- ▶ Air quality in the Uinta Basin has exceeded National Ambient Air Quality Standards (NAAQS)
- ▶ DAQ reports challenges inspecting the roughly 3,600 oil and gas well sites in the state
- ▶ At its current rate of inspections, it would take more than 13 years to inspect each well site once

**FOR MORE INFORMATION**

**Chapter 4 pages 27-31**

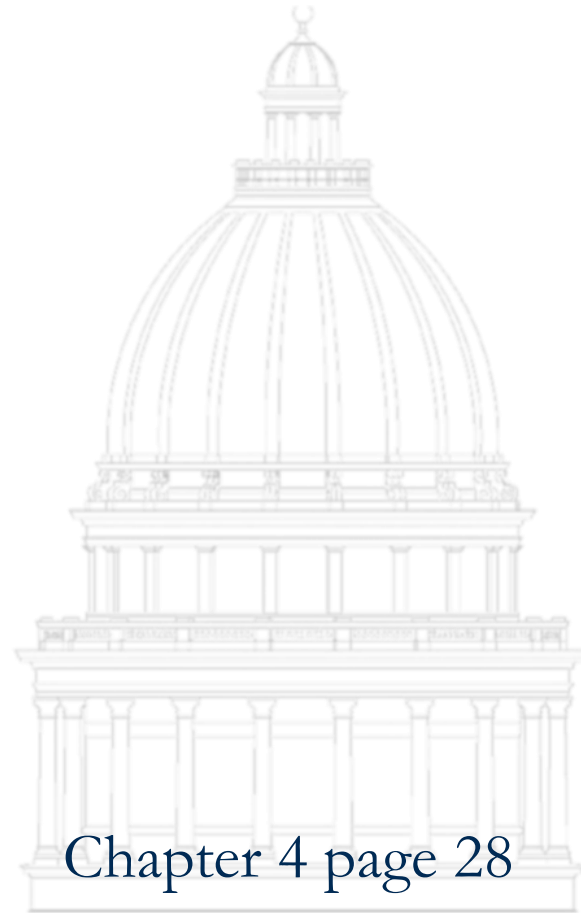
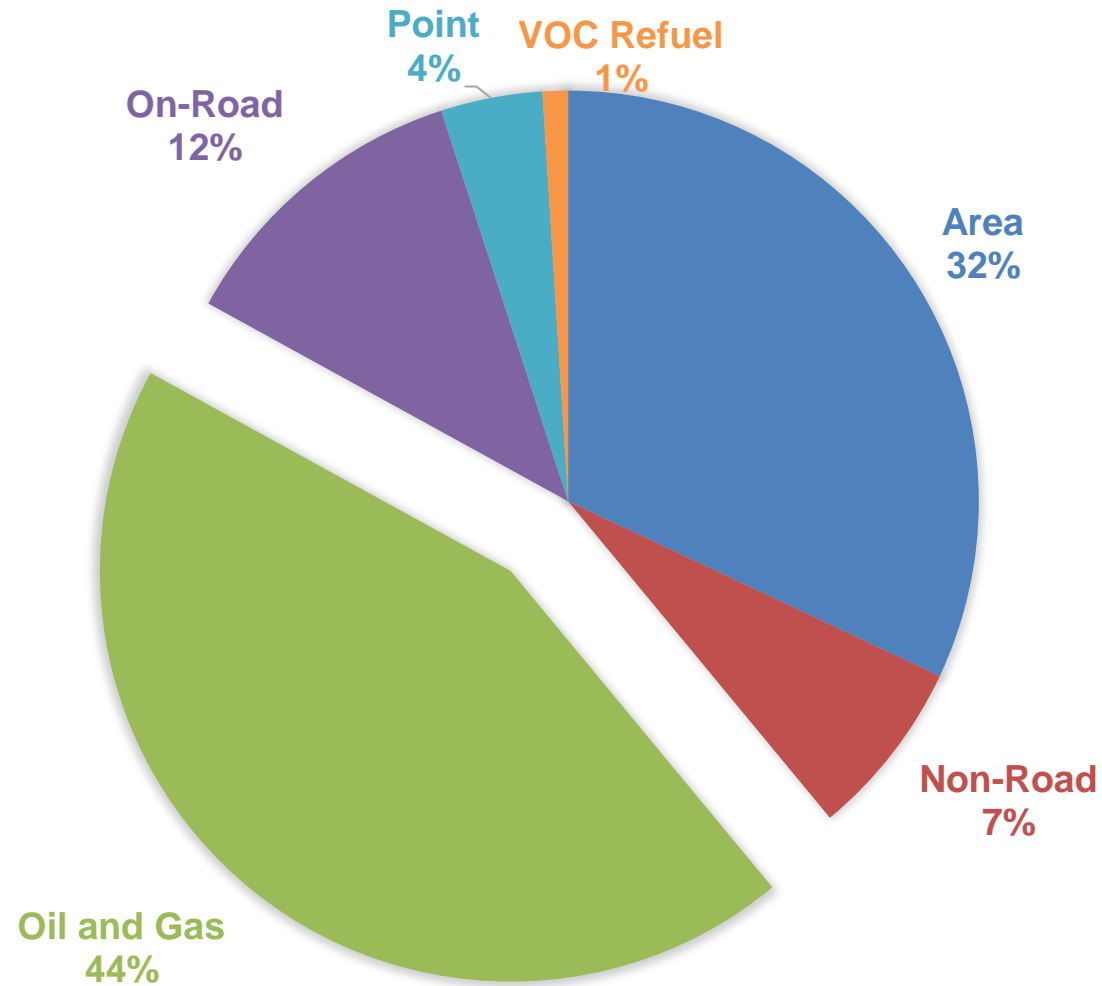
## Oil and Gas Fields in the Utah





# 44% of Statewide VOC Emissions are from The Oil and Gas Sector

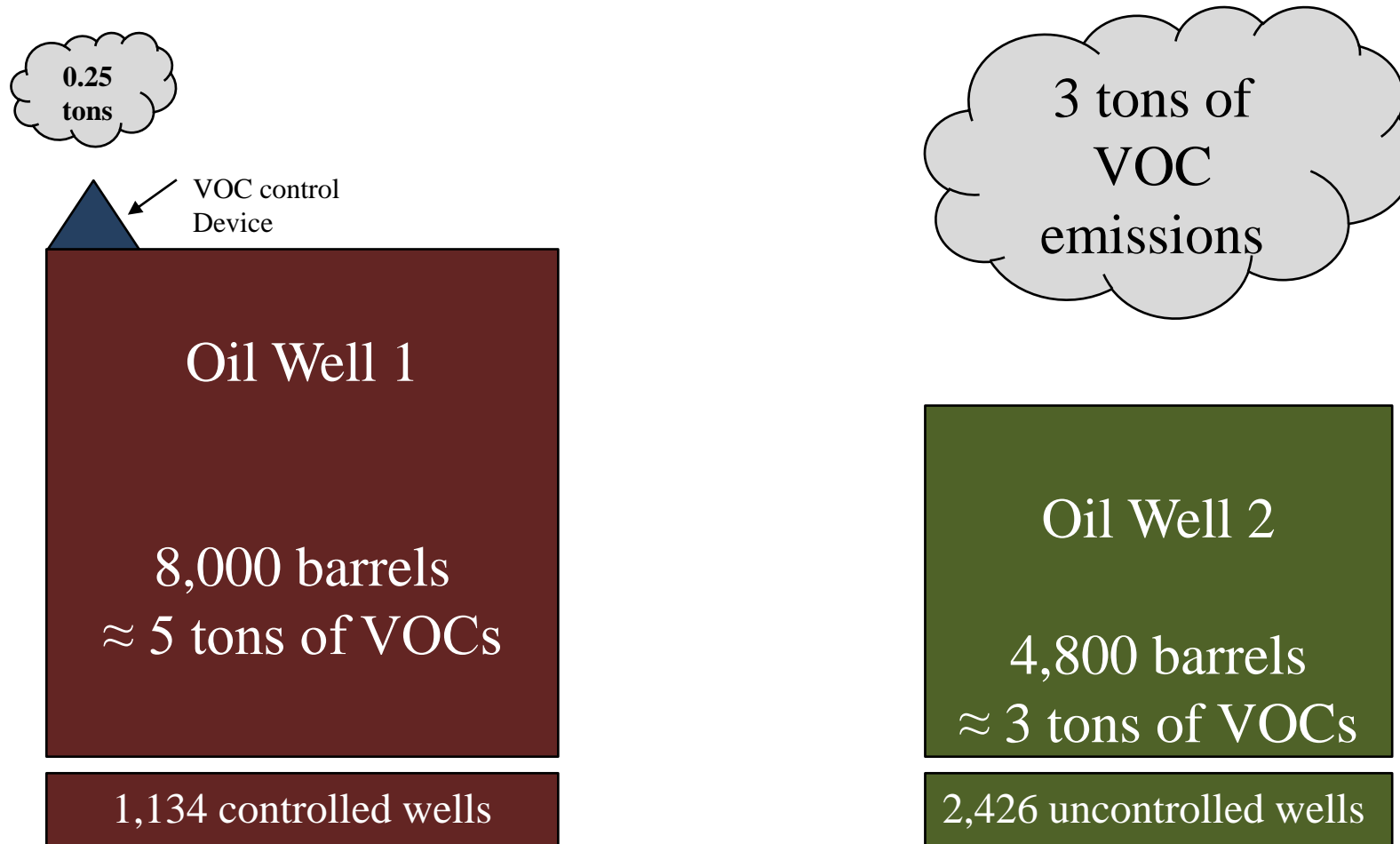
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Chapter 4 page 28

# The Majority of Oil and Gas Wells Are Currently Not Required to Control Their VOC Emissions

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Chapter 4 pages 28-29

# Opportunities Exist for DOGM and DAQ to Collaborate

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- ▶ The Division of Oil, Gas and Mining (DOGM) has a more regular presence at oil and gas well sites
- ▶ DOGM inspectors have some familiarity with techniques used by DAQ inspectors
- ▶ DAQ has successfully partnered with other DEQ divisions to more efficiently fulfill its mission

**FOR MORE INFORMATION**

Chapter 4 page 31-33

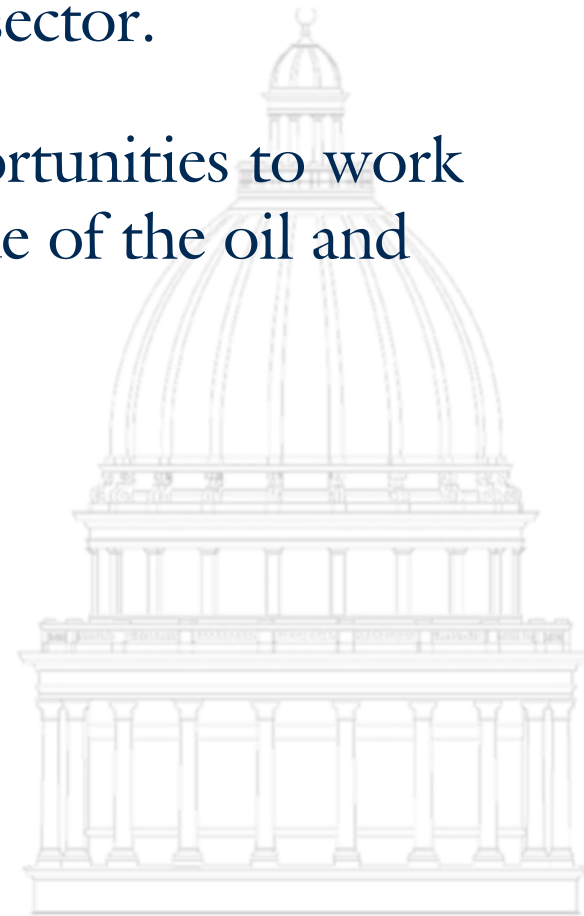
# Recommendations

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1. We recommend that the Division of Air Quality explore ways it can efficiently use DOGM inspections to increase its effectiveness in the oil and gas sector.
2. We recommend the Division of Air Quality continue to find opportunities to work with other DEQ divisions to find efficiencies in inspections outside of the oil and gas sector.

**FOR MORE INFORMATION**

**Chapter 4 page 33**



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# A Performance Audit of The Division of Air Quality

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Utah Legislative Auditor General  
August 18, 2020

